United States Senate
Republican Policy Committee
Jon Kyl, Chairman
347 Russell Senate Office Building
Washington, DC 20510
202-224-2946
http://rpc.senate.gov

November 15, 2006

# Overview of the India Civilian Nuclear Agreement

## *Executive Summary*


- In a July 18, 2005 joint statement with Indian Prime Minister Manmohan Singh, President Bush pledged to work to make the necessary changes in U.S. law and in international fora to allow full civilian nuclear energy cooperation with India.

- In return, India committed to identify civilian nuclear facilities and programs and separate them from the military. India will then declare the civil facilities to the International Atomic Energy Agency and place them under safeguards.

- Supporters of the agreement argue that this cooperative venture will strengthen and deepen the U.S. relationship with India.

  - It will help India meet its exponentially growing energy demands without increasing its reliance on unstable foreign sources of oil and gas, such as nearby Iran.
  - Easing India's reliance on scarce carbon-based energy resources will alleviate increasing competition for those resources, lessening pressures on global energy prices.
  - India's increased demand for nuclear power provides opportunities for U.S. firms.

- Secretary Rice also argues that this initiative is a net gain for global nonproliferation efforts because India's commitments under the agreement will bring India into the global nuclear nonproliferation mainstream.

- Opponents contend that the agreement sets a bad international precedent and has devastating consequences for the international nonproliferation regime because it loosens export rules for a U.S. ally at a time when the United States is urging other countries to strengthen their export control laws.

  - To this end, the agreement could hinder efforts to encourage China and Russia to end nuclear trade with Iran.

- Opponents also criticize the agreement for not limiting India's capacity to produce nuclear weapons, and claim that various gains expected to attend the agreement are speculative.

- In the end, only vigilant oversight in the coming years will determine whether the benefit of a strengthened and deepened relationship with India comes to pass, and if that benefit outweighs any costs to the nonproliferation regime.

## Introduction

Both the current domestic legal regime and the international nonproliferation regime prohibit trade in nuclear materials and technology with India. In a July 18, 2005 joint statement with Indian Prime Minister Manmohan Singh, President Bush pledged to work to make the necessary changes in U.S. law and in the international fora to allow full civilian nuclear energy cooperation with India, in return for various commitments by India. This paper outlines the arguments in support of and against this agreement. The Senate Foreign Relations Committee reported out the United States-India Peaceful Atomic Energy Cooperation Act, which is Title I of S. 3709, by a vote of 16-2 on June 29, 2006. This bill authorizes the changes in law necessary to allow the United States to complete a peaceful nuclear cooperation agreement with India.

## Background: Contours of the July 18, 2005 Joint Statement

In reaction to India's 1974 nuclear test,[1] the United States terminated, by law, U.S. nuclear cooperation with India. Additionally, the United States proposed the formation of the Nuclear Suppliers Group ("NSG")[2] as a means to control the transfer of nuclear technology.[3] The Guidelines of the NSG, to which the United States adheres, currently prohibit the transfer of nuclear technology to India.

On July 18, 2005, President Bush committed to Indian Prime Minister Manmohan Singh to work with Congress to make the necessary changes in U.S. law, as well as work to adjust international nonproliferation regimes, to allow "full civilian nuclear energy cooperation with India." In return, the Prime Minister committed to "assume the same responsibilities and practices . . . [as] other leading countries with advanced nuclear technology." The responsibilities and practices to which India committed include:

- Separation Plan: identify and separate civilian and military nuclear facilities and programs;
- Declaration: declare the civil facilities to the International Atomic Energy Agency ("IAEA");
- Safeguards: place the civil facilities under IAEA safeguards in perpetuity;
  - Safeguards are a set of technical measures by which the IAEA seeks to verify that a country is adhering to its international commitments not to use nuclear programs for nuclear weapons purposes.

[1] Indian Prime Minster Indira Gandhi insisted the test was a "peaceful nuclear explosive," George Perkovich, *India's Nuclear Bomb*, p. 2 (Univ. of CA Press, 1999); although the United States has never accepted this characterization of that test. Robert Joseph and Nicholas Burns, Responses to Question for the Record 5(b) by the Under Secretary of State for Arms Control and International Security and the Under Secretary of State for Political Affairs (the Department's third ranking official), reprinted in the Senate Report Accompanying the United States-India Peaceful Atomic Energy Implementation Act, S. 3709, S. Rpt. 109-288, p. 76.

[2] The NSG is a collection of states that voluntarily agree to coordinate their export controls governing transfers of civilian nuclear material, equipment, and technology to non-nuclear weapon states, with the goal of preventing commercial and peaceful nuclear exports from being used to make nuclear weapons.

[3] *See* Perkovich, p. 191 (characterizing the major aim of this endeavor as an attempt to "plug loopholes such as those that had allowed India to produce its 'peaceful' nuclear explosive").

- Additional Protocol: sign and adhere to;[4]
- Nuclear testing: continue moratorium;
- Fissile Material Cut-off Treaty ("FMCT"): work with United States to conclude;[5]
- Export control measures:
  - adhere to Missile Technology Control Regime ("MTCR") and NSG Guidelines;[6]
  - enact comprehensive export control legislation that harmonizes India's control list with the control lists of those multilateral forums; and
  - refrain from transfer of enrichment and reprocessing technology to states that do not already have such technology, and support efforts to limit spread of these materials and this technology.[7]

## Arguments in Favor of the Nuclear Cooperation with India

Supporters of civil nuclear cooperation with India offer various arguments in support of their position.

### ***Importance of the Relationship with India***

The crucial argument in favor of this cooperative venture rests on the long-term importance of the relationship between the United States and India. Secretary Rice has argued that this agreement "will deepen our strategic partnership" in one of the "most important" partnerships the United States will have in the 21st century.[8] The Senate Foreign Relations Committee found that India can be a "key partner in countering global extremist trends."[9]

Strategically, India is a rising global power, and supporters argue that it is in the interest of the United States to continue building its relationship with India now, rather than later.[10] The relationship is currently expanding and deepening in many vital areas of common interest, but the inability to interact in the nuclear energy field is an impediment that has complicated efforts

[4] The IAEA Additional Protocol expands the type of facilities and amount of information states must declare to the IAEA, and provides the IAEA with additional measures to verify and monitor these expanded declarations.
[5] This commitment may be satisfied by a multilateral agreement pertaining to the cessation of the production of fissile materials for use in nuclear weapons other than an agreement under the name of FMCT. S. Rpt. 109-288, p. 30.
[6] Both Secretary Rice, Prepared Statement of the Secretary of State before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 5, 2006, and the Senate Foreign Relations Committee, S. Rpt. 109-288, p. 20, believe that India should be similarly involved in other multilateral nonproliferation and export control regimes, most notably the Wassenaar Arrangement and the Australia Group, which respectively address dual use technologies and chemical and biological weapons capabilities.
[7] The Senate Foreign Relations Committee expressed displeasure with India's apparent reticence to participate in the Proliferation Security Initiative actively and expressed its aspiration that India do so. S. Rpt. 109-288, p. 21.
[8] Rice, Prepared Statement, Apr. 5, 2006.
[9] S. Rpt. 109-288, p. 3.
[10] Thomas Donnelly and Vance Serchuk, *Ink the India Deal*, The Weekly Standard, June 12, 2006 (quoting an unnamed U.S. military officer) ("The costs of building a relationship with India today are significantly lower than the costs of facing India as a spoiler in the future. Moreover, the costs of building a relationship with India will probably increase over time.").

to improve bilateral relations. By removing this impediment,[11] Secretary Rice has argued that the strategic partnership will be elevated to a new strategic height.[12] Broadening the scope of cooperation with India will be crucial to ensuring peace, prosperity, and stability in the region and globally.

The relationship with India is not just one of geopolitical congruence of shared dangers and interests, it is also one of shared values. India is an open, free, transparent, multi-ethnic, multi-religious democracy with free and fair elections and individual freedom based on the rule of law. Hence, Secretary Rice states, it is a "natural partner" for the United States in an uncertain region.[13]

## ***India's Enhanced Energy Security Protects U.S. Interests***

India has a massive and rapidly growing appetite for energy, given its emergent economy, huge population growth, and expanding industrial production. For example, in 2003, it was the sixth largest consumer of energy in the world; and between 1980 and 2001, its energy demand increased by 208 percent.[14] India believes it will need nuclear power to sustain its growth and meet its energy needs, as only 2 percent of its total power generation currently comes from nuclear energy, and India has expressed a desire to increase this to 20 percent.[15]

The civil nuclear cooperation initiative is directed at securing India's exponentially growing energy demands, which supporters argue benefits the United States in multiple ways. First, as Secretary Rice said, "Civil nuclear cooperation with India will help it meet its rising energy needs without increasing its reliance on unstable foreign sources of oil and gas, such as nearby Iran."[16] It is not in the U.S. interest for India's energy needs to drive its general foreign policy direction. Next, easing some of India's reliance on scarce carbon-based energy resources will alleviate increasing competition for those resources between India, other rapidly expanding economies, and the United States, thereby lessening upward pressures on global energy prices. Again, the civil nuclear cooperation initiative is designed to assist India in increasing its use of nuclear power for energy needs, which concomitantly would alleviate its reliance on fossil fuels and the unstable sources of them.[17]

## ***U.S. Business Opportunities from the Agreement***

[11] Robert Gallucci, Prepared Statement of the Dean of the Georgetown University School of Foreign Service before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 5, 2006 (describing U.S. nonproliferation policy with respect to India as a "chronic irritant" to the relationship).
[12] Rice, Prepared Statement, Apr. 5, 2006.
[13] Rice, Prepared Statement, Apr. 5, 2006.
[14] Rice, Prepared Statement, Apr. 5, 2006.
[15] Rice, Prepared Statement, Apr. 5, 2006.
[16] Rice, Prepared Statement, Apr. 5, 2006. At the same time, India already has an increasing defense cooperation posture with Iran, as evidenced by the recent port visit by Iranian naval vessels and personnel to India. Vivek Raghuvanshi & Gopal Ratnam, *Indian Navy Trains Iranian Sailors*, Defense News, Mar. 27, 2006, reprinted at S. Rpt. 109-288, p. 227.
[17] This would also benefit the environment, as decreased reliance on fossil fuels would reduce carbon emissions. Rice, Prepared Statement, Apr. 5, 2006.

This initiative is not simply a government-to-government effort, but rather, as Secretary Rice states, was designed with the private sector in mind. India's growing market is an opportunity for U.S. firms. For example, American exports to India have doubled in just the last four years.[18] As India expands its nuclear power sector and opens that sector to global competition, opportunities are made available for American businesses to compete to meet India's increasing demand for civilian nuclear technology, fuel, and assistance. This translates into jobs, incomes, and markets for U.S. firms. Secretary Rice postulates that many new jobs will be created in the United States in meeting India's increased demand for nuclear power, especially if India buys just two reactors from U.S. companies.[19]

## ***The Initiative Enhances the Global Nonproliferation Regime***

Secretary Rice has asserted that this initiative is a "net gain for global nonproliferation efforts."[20] The crux of this particular argument is that it is better to bring India most of the way into the global nonproliferation regime than it is to have India isolated and all the way out of the regime.[21] India's commitments under the agreement will end India's 30-year isolation from the regime, and will bring "India into the global nuclear non-proliferation mainstream."[22]

Supporters assert that India's standing in the nonproliferation community is more anomalous than it is nefarious. First, Secretary Rice states that India did not "cheat" on the Nuclear Nonproliferation Treaty ("NPT") to develop nuclear weapons. It has never joined the treaty, and it developed weapons outside of the treaty's context by finishing a program that had begun long before the NPT was even signed.[23] Next, supporters believe that India is a responsible member of the nonproliferation community with respect to transfers of nuclear technology.[24] Moreover, it has been continuing to take significant positive steps with respect to proliferation initiatives in general. Of particular note, India enacted export control legislation in May 2005, which strengthens its export control capabilities. The controls are consistent with the types of measures the United Nations Security Council required of states in Resolution 1540, which mandated that all states take action to prevent the proliferation of weapons of mass

---

[18] Rice, Prepared Statement, Apr. 5, 2006.
[19] Rice, Prepared Statement, Apr. 5, 2006.
[20] Rice, Prepared Statement, Apr. 5, 2006.
[21] Rice, Prepared Statement, Apr. 5, 2006.
[22] State Department Fact Sheet, U.S.-India Civil Nuclear Cooperation Initiative, Mar. 9, 2006, *available at* http://www.state.gov/documents/organization/63007.pdf. *See also* Statement of Dr. Mohamed ElBaradei, International Atomic Energy Agency Director-General, IAEA Director General Welcomes U.S. and India Nuclear Deal, IAEA Press Release 2006/05, Mar. 2, 2006, *available at* http://www.iaea.org/NewsCenter/PressReleases/2006/prn200605.html ("It would also bring India closer as an important partner in the non-proliferation regime."). *But see* Gary Milhollin, remarks of the Director of the Wisconsin Project on Nuclear Arms Control, before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 26, 2006, reprinted in relevant part at S. Rpt. 109-288, p. 306 (stating that it is not appropriate for Dr. ElBaradei to approve of the agreement from a political, diplomatic, or strategic perspective, because the role of the IAEA is to inspect the reactors a country agrees to put under inspections, and not reject that invitation because not all of the country's reactors were declared to the IAEA).
[23] Rice, Prepared Statement, Apr. 5, 2006. At the same time, India may have acted in less than good faith with respect to its prior civil cooperation with the United States prior to India's 1974 nuclear test. Plutonium from the CIRUS reactor, to which the United States had provided assistance under the Atoms for Peace program, was used in India's 1974 nuclear test. Perkovich, p. 198.
[24] Rice, Prepared Statement, Apr. 5, 2006. This argument will be examined in further detail in the next section.

destruction.[25] As another crucial piece of evidence offered, India voted twice with the United States in the IAEA to 1) find Iran not in compliance with its obligations, and 2) report Iran's nuclear violations to the United Nations Security Council.[26]

A subset of this proliferation argument addresses the claim that this agreement will lead to an arms race in South Asia. Secretary Rice asserted that civil nuclear cooperation will not have this consequence because the prospects for such an arms race will be driven by the bilateral dynamic of India and Pakistan much more than this particular initiative.[27]

## Concerns Raised About Nuclear Cooperation with India

Various concerns have been raised about a proposed nuclear cooperation agreement with India.

### ***Critics: Agreement Sets a Bad Precedent for Proliferation Norms***

Many critics of the agreement argue that it sets a bad international precedent and has devastating consequences for the international nonproliferation regime. They further claim that the nonproliferation regime is already suffering adverse consequences due to the agreement.

#### **Critics: agreement changes the rules for a United States "friend"**

The critics argue that this agreement relaxes export controls for a U.S. "friend,"[28] which upsets the fundamental principle of neutrality upon which the nonproliferation export control regime rests. The cardinal principle of the NSG is that it is "country neutral," in that it does not make exceptions for specific countries based on their form of government, or their relationships with the other members of the group.[29] Rather, the regime uses objective criteria to measure whether an export of the technology within its purview should be allowed to non-nuclear weapon

[25] Burns, Response to QFR 32(c), reprinted in S. Rpt. 109-288, p. 103.
[26] On the other hand, the Non-Aligned Movement, of which India is a part, held its 14th Heads of State Summit Conference in Havana, Cuba from September 11-16, 2006. Various statements were issued at the conclusion of that summit meeting, including one on the Iranian nuclear issue. NAM 2006/Doc.12/Rev 1. That statement, among other things, "reaffirmed the inviolability of peaceful nuclear activities," cautioned against the "attack or threat of attack against peaceful nuclear facilities," and "demanded Israel to accede to the NPT without delay and place promptly all its nuclear facilities under comprehensive IAEA safeguards." ¶¶ 6-7.
[27] This assertion seems to be incomplete. This agreement must have some, albeit unquantifiable, impact on the bilateral relationship between India and Pakistan. It is not clear that this agreement would have no impact on arms competition between the two states. Moreover, it is likely not the case that this agreement will have no impact on broader regional dynamics, particularly involving China.
[28] Robert J. Einhorn, Prepared Statement of the Center for Strategic and International Studies Senior Advisor before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 26, 2006 (characterizing the agreement as one "seeking an exception to the rules for a country with which the United States wishes to build a special friendship").
[29] *See* Gary Milhollin, Prepared Statement of the Director of the Wisconsin Project on Nuclear Arms Control, before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 26, 2006.

states. As Gary Milhollin, Director of the Wisconsin Project on Nuclear Arms Control, argues, this allows the regime to avoid making politically motivated decisions.[30]

Critics may also raise a fundamental concern about the precedent the agreement sets, claiming that the agreement reduces the costs to a country for developing a nuclear weapon. When India exploded a nuclear device in 1974, there was a cost to that decision, as U.S. nuclear assistance was terminated. This agreement, however, seemingly tolerates and accommodates India's decision to develop a nuclear weapon, as it reverses the decision to cut off assistance; which critics argue represents a de facto acceptance of India "as a nuclear weapon state in all consequential respects."[31] The effect of the agreement allows India to designate the nuclear facilities it will submit as civilian to IAEA safeguards, still maintain a nuclear weapons program, and gain the benefits of civilian nuclear trade—just like a nuclear weapon state under the current nonproliferation regime. In this regard, this agreement would provide an example to the global community of how a state can develop a nuclear weapon but eventually successfully seek future forgiveness for that transgression. The state would need to maintain a restrained behavior with that weapon and technology, along with a favorable regime and relationship with other members of the nonproliferation community.[32]

**Critics: U.S. would relax export controls while urging others to strengthen their own**

Critics then argue that this agreement is relaxing U.S. export controls precisely at a time when the United States is straining to convince other countries to strengthen their export controls. It would allow U.S. companies to sell sensitive technology to India, which critics argue emphasizes commercial goals at the expense of nonproliferation goals.[33] This may be the wrong example to set when the United States is trying to convince Russia and China not to sell sensitive technology to Iran. Ashton Carter, an Assistant Secretary of Defense for International Security Policy under President Clinton, argues that the agreement would reverse decades of U.S. leadership in the NSG. He describes how the United States "has long stood strong against backsliding by member governments that come under pressure from their nuclear industries to sell technology abroad more liberally, including especially to India."[34] Critics take the argument that this agreement relaxes U.S. export controls and changes nonproliferation rules for an ally to provide a potential real-world example of the consequences of this agreement.

**Critics: agreement is a bad example for nuclear trade with Iran**

[30] Milhollin, Prepared Statement, Apr. 26, 2006.
[31] Einhorn, Prepared Statement, Apr. 26, 2006.
[32] *See* Ashton B. Carter, Prepared Statement of the Coordinator for the Harvard University Belfer Center for Science and International Affairs Preventative Defense Project Center before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 26, 2006; Einhorn, Prepared Statement, Apr. 26, 2006 (suggesting such a scenario).
[33] Milhollin, Prepared Statement, Apr. 26, 2006 ("Boiled down to the essentials, the message is clear: Export controls are less important to the United States than money."); Einhorn, Prepared Statement, Apr. 26, 2006 ("[The deal will send the signal that the U.S. . . . is now de-emphasizing nonproliferation and giving it a back seat to other foreign policy and commercial goals.").
[34] Carter, Prepared Statement, Apr. 26, 2006.

Gary Milhollin postulates that "if the United States decides to drop controls to help one of its friends—in this case India—other supplier countries will do the same for their friends. China will drop controls on its friend Pakistan, and Russia will drop its controls on its friend Iran."[35] Robert Einhorn, Assistant Secretary of State for Nonproliferation under President Clinton describes how Russia recently sent a large nuclear fuel shipment to India's Tarapur reactors under the guise of the NSG "safety exception," and over the objection of most NSG members, when only a year ago Russia had concluded that it *could not* so act due to its NSG obligations.[36] He also notes that China and Pakistan began discussing additional reactor sales soon after the United States-India agreement was announced. Mr. Einhorn claims that these actions by China and Russia are not unrelated to the United States-India announced initiative.[37]

**Rebuttal: Iran/North Korea and India are not equivalent**

The Administration directly addresses the argument that this agreement undermines its efforts to curb Iran and North Korea's nuclear ambitions. First, Secretary Rice addresses the alleged "double standard" by arguing that it is not credible to compare North Korea or Iran to India, because India is a transparent and accountable democracy that works within the international system to promote peace. In contrast, Iran and North Korea are state sponsors of terror, with a long record of cheating on nuclear obligations and violating proliferation norms.[38]

Secondly, on a more practical level, the Administration contends that the NSG would need to change its rules to allow nuclear supplier states to provide the technology that is at issue in the India agreement to other states that do not have full-scope safeguards. For example, if China were to approach the NSG for such an accommodation to provide additional reactors to Pakistan,[39] Secretary Rice has stated that the United States, and likely other NSG members, would not support such an initiative. Thus, China would be unable to receive such an accommodation, given the consensus procedures of the NSG.[40]

## *Critics: Agreement Will Increase India's Nuclear Weapons Capability*

The United States is obligated under Article I of the NPT to not "in any way" assist any non-nuclear weapon state to manufacture nuclear weapons. Critics raise a basic concern that this agreement does not intrude upon, or limit, India's weapons program. They argue that the reactors India does not declare as civil and place under safeguards can still be used to make all

[35] Milhollin, Prepared Statement, Apr. 26, 2006.
[36] Einhorn, Prepared Statement, Apr. 26, 2006.
[37] Einhorn, Prepared Statement, Apr. 26, 2006 (stating that "it is highly unlikely that Russia would have played so fast and loose with the NSG's rules in the absence of the U.S.-India nuclear deal," and that the China-Pakistan discussions are "not by coincidence").
[38] Rice, Prepared Statement, Apr. 5, 2006.
[39] Upon joining the NSG in 2004, China did disclose its intention to continue cooperation with Pakistan under the grandfathering exception to the NSG Guidelines, despite NSG Guidelines provisions requiring full-scope safeguards as a condition of nuclear supply, which Pakistan does not have. Rice, Response to QFR, reprinted in S. Rpt. 109-288, pp. 163-64.
[40] Rice, Response to QFR, reprinted in S. Rpt. 109-288, pp. 163-64.

the material it needs for its weapons program.[41] It is unclear what this counsels for, however, because it is well known that India has a nuclear weapons program and this agreement was not designed to halt or intrude upon it.

Critics argue that this agreement will increase India's capacity to produce nuclear weapons, which seems to mimic a "guns vs. butter" debate, and rests on premises of fungibility and opportunity cost. The premise is that India has a limited amount of natural uranium, which can be directed either to civil uses of power production or military uses of weapons-grade plutonium production. In the past, India could meet both needs fully, and only recently may have had to begin choosing between directing these resources to civil or military uses.[42] This is because, even though India has sufficient uranium reserves for the time-being, it currently has a bottleneck in mining, milling, and processing capacity for that natural uranium. Consequently, India is consuming more uranium than it is producing, and so would deplete the natural uranium reserves at some point absent relief.[43] This problem is exacerbated by the fact that India cannot purchase uranium on the spot market to alleviate this shortfall because NSG guidelines prohibit uranium sales to India. Hence, the argument concludes, for every amount of foreign fuel supplied to India under revised NSG guidelines allowing such sales, this releases India's existing domestic stockpile and capacity to use the uranium for plutonium (weapons) production purposes.[44] This would consequently increase India's weapons production capacity.

Critics of the agreement contend that this fungibility argument is compelling for at least two reasons, even if India civil facilities are placed under safeguards, which are meant to protect against this agreement assisting India's nuclear weapons. First, they contend that safeguards are not fool-proof, and that this is especially the case in a country that has a well-developed nuclear program, such as India, as exemplified by Iraq's substantial nuclear weapons program within the IAEA safeguards regime prior to the 1991 Gulf War. Second, critics argue that civil nuclear assistance with India cannot be fully separated from assistance to the weapons program, because supplied uranium fuel is much more directly related to India's weapons program than other types

[41] Milhollin, Prepared Statement, Apr. 26, 2006 ("[T]he reactors that are off-limits [to safeguards] will be sufficient to produce enough plutonium for dozens of nuclear weapons per year. . . . India is not restricting its nuclear weapon production in any way. Therefore, there is no 'non-proliferation benefit' from such a step."); Einhorn, Prepared Statement, Apr. 26, 2006 (asserting that, under India's separation plan, "India has kept open plenty of options for producing fissile material for its weapons program"); Gallucci, Prepared Statement, Apr. 26, 2006 ("There is no reason why we should attach any positive value to India's willingness to submit a few additional nuclear facilities of its choosing to international safeguards, so long as other fissile material producing facilities are free from safeguards.").

[42] S. Rpt. 109-288, p. 23.

[43] Henry Sokolski, Prepared Statement of the Executive Director of the Nonproliferation Policy Education Center before the Senate Foreign Relations Committee hearing on the United States-India Civil Nuclear Cooperation Initiative, Apr. 26, 2006. Ashley Tellis asserts that any current technical limitation on India's ability to employ its own domestic uranium resources for plutonium production due to the bottleneck in its mining and milling capacities is "a passing perturbation," because the Indian government has devoted sufficient budgetary resources to address and rectify these constraints in capacity. Ashley J. Tellis, *Atoms for War?*, pp. 45-47 (Carnegie Endowment for International Peace, 2006). This is important because, if India successfully addresses these capacity shortfalls, then the problems of India's so-called "uranium deficit" become relieved in the near term; and, if India successfully implements its Thorium-3 cycle, would "lose much of their salience" in the long-term. Id. at p. 41. The Thorium-3 cycle is explained in note 59.

[44] *See, e.g.*, S. Rpt. 109-288, p. 23 (noting the arguments of critics); Open letter to Members of the House of Representatives, dated Nov. 18, 2005, reprinted in S. Rpt. 109-288, p. 223.

of economic assistance. They claim that the Government of India itself has essentially admitted that its civilian and nuclear energy programs cannot be wholly de-linked.[45] There are, however, important legal and political rejoinders to these arguments, to be discussed below.

**Rebuttal: agreement does not violate U.S. obligations under NPT**

Legally, supporters of the agreement assert that it proves too much to assert that fungibility between foreign fuel supply and the capacity to draw upon domestic uranium reserves amounts to an NPT violation. Ashley Tellis, who was involved in negotiating the civil nuclear agreement with India and is now a senior associate at the Carnegie Endowment for International Peace, points out what he terms is the "absurdity" of the fungibility argument. That is, its logical conclusion would be that any economic intercourse whatsoever with India would inevitably free up some domestic Indian resources that could be used in India's nuclear weapons program, and thereby violate the NPT Article I injunction that states are not to assist "in any way" another state's nuclear weapons program.[46] Moreover, Secretary Rice argues that U.S.-origin nuclear items provided to India will remain exclusively on the civil side of the Indian nuclear program, as the IAEA safeguards to which India will agree will provide assurances of this, and that past practice confirms the understanding that the NPT "does not treat peaceful nuclear cooperation under safeguards as assisting a non-nuclear weapon state to manufacture nuclear weapons."[47]

Politically, the concern that this agreement will contribute to India's weapons capacity is addressed in two ways. First, it is mitigated by the fact that India's military program has always received first priority when it came to a battle of domestic resources.[48] Thus, it would not seem to be of consequence that domestic resources might be made available under the agreement for the military program, since the military program was already first in line. Second, it is important to recognize that India seeks a "minimum credible deterrent,"[49] not the largest possible nuclear weapons inventory its domestic resource allocation will bear. To this end, it does not seem that India has produced nuclear weapons at the maximum rate its infrastructural capacity will allow.[50] Thus, this past practice suggests that India would not necessarily produce weapons beyond its current production rate and capacity when this agreement increases India's nuclear capabilities.

The Senate Foreign Relations Committee accepted this political argument in terms of history, but cautioned that the impact of civil nuclear commerce on India's weapons program, if any, is an empirical question that will require attention in years to come.[51] The Committee cautioned that, although it would be difficult to establish a causal relationship between civil

[45] India Separation Plan § 6 (May 6, 2006), reprinted in relevant part at S. Rpt. 109-288, p. 66 ("Identification of purely civilian facilities and programmes that have no strategic implications poses a particular challenge.").
[46] Tellis, pp. 9-10. Secretary Rice presents a more restricted "absurdity" argument, by noting that, "in essence, nuclear cooperation under safeguards does not fundamentally differ from other forms of energy cooperation (*e.g.*, oil supply, clean coal technology, alternative fuels). All such energy assistance would arguably relieve India of its reliance on domestic uranium for energy production. Yet such energy assistance clearly could not be viewed as assisting India in the manufacture of nuclear weapons." Rice, Response to QFR, reprinted in S. Rpt. 109-288, pp. 172-73.
[47] Rice, Response to QFR, reprinted in S. Rpt. 109-288, p. 172.
[48] S. Rpt. 109-288, p. 23 (referencing administration contentions).
[49] S. Rpt. 109-288, p. 18.
[50] Tellis, p. 13 ("India appears to be in no hurry to build the biggest nuclear stockpile it could construct.").
[51] S. Rpt. 109-288, p. 23.

nuclear commerce with India and a consonant increase in India's fissile material production for nuclear weapons, "U.S. nuclear trade with India *must not even be seen* as leading to any increase in India's fissile material stockpile."[52] The Committee stated its position that, "if it should become evident that U.S. civil nuclear commerce with India is indirectly assisting India's nuclear weapons program, . . . then it would be incumbent upon the United States, under the NPT, to cease those contributing elements of its civil nuclear commerce with India."[53] In this regard, it seems that it will only become clear in the future whether this agreement violates U.S. international nonproliferation obligations.

## ***Critics: India's Separation Plan Raises Concerns***

India committed to identify and separate its civilian and military nuclear facilities and programs, declare those civil facilities to the IAEA, and place them under safeguards. These commitments are meant to provide assurances that any international assistance provided to India's civil program will not be diverted to India's weapons program.[54] India's separation plan places under safeguards 14 of its 22 reactors currently in operation or under construction.[55]

### **Critics: separation plan does not declare the breeder reactors**

Some nonproliferation experts have raised concerns about the separation plan in its current form, claiming that the plan "does not constitute a true separation of civilian and military nuclear facilities."[56] As will be discussed, the Administration defends the separation plan on the grounds that a large percentage of India's reactors will be placed under safeguards; but critics reply that the defensibility of the separation plan from a nonproliferation standpoint cannot be measured by quantification.[57] The argument places particular focus on India's decision not to declare its "breeder reactors" to be civil,[58] which are a crucial element of India's three-stage nuclear fuel cycle.[59] This failure to designate the breeder reactors as "civil" raises concerns for at least two reasons, namely that the breeder reactors 1) involve elements of proliferation concern that 2) will be handled outside of the IAEA safeguards regime.

First, the first two stages of India's three-stage cycle, respectively, create plutonium and uranium-233, which are items of proliferation concern in that they can be used to manufacture

---

[52] S. Rpt. 109-288, p. 19 (emphasis added).
[53] S. Rpt. 109-288, p. 23.
[54] E.g. Rice, Response to QFR, reprinted in S. Rpt. 109-288, p. 159.
[55] India provided an initial draft of its separation plan on March 2, 2006, to coincide with the President's trip to India; and then a final draft on May 6, 2006. Reprinted at S. Rpt. 109-288, p. 57. Detailed analysis of the plan is available at S. Rpt. 109-288, pp. 6-11; and Congressional Research Service, *India's Nuclear Separation Plan: Issues and Views*, CRS Rpt. No. RL33292 (July 21, 2006).
[56] S. Rpt. 109-288, p. 8 (noting the criticisms of nonproliferation experts in this regard).
[57] *See, e.g.*, Einhorn, Prepared Statement, Apr. 26, 2006 ("[S]trategically, the percentage of reactors under safeguards is meaningless.").
[58] S. Rpt. 109-288, p. 9.
[59] In the first stage, natural uranium is transmuted in pressurized heavy water reactors to produce plutonium. This plutonium is then taken to the second stage and used to "breed" uranium-233 in fast neutron reactors. The resulting uranium-233 would then be combined with thorium in the third stage, to generate the reactor's power output. Tellis, p. 41.

nuclear weapons.[60] This in and of itself is cause for apprehension. As the Committee noted, it is Administration policy to regard un-safeguarded stockpiles of plutonium as a danger to U.S. national security, and to discourage the accumulation of plutonium.[61]

Second, the handling of such materials outside of safeguards (which will take place because the breeder reactors were not declared to be civilian) raises concerns of diversion. As Secretary Rice has said, this three-stage fuel cycle "requires considerable handling of fissile material in the various loading, unloading, and transfers associated with the stages of the fuel cycle. Each time fissile material is handled, there is a risk of diversion."[62] One type of diversion would be from an employee of a facility directing the material to his own personal or other illicit use. Moreover, diversion could also take place through a conscious decision to redirect to the state's military program some of the materials in the civilian program that are of particular attractiveness to the military program. This type of diversion would wholly repudiate the basis of peaceful nuclear cooperation with India.[63]

**Critics: criteria of separation plan are not clear**

With respect to the method India used to decide which of its nuclear facilities were to be declared civilian, India stated that it will only include those facilities that will no longer be engaged in activities of strategic significance after separation.[64] India further stated that it will exclude facilities from the civilian list if they were located in a larger hub of strategic significance, even if they were not normally engaged in activities of strategic significance themselves. The Committee acknowledged that this plan does not provide assurances as to how facilities were identified as civilian, the consequence being that it is difficult to discern which facilities in India are truly for civilian power production and which are for a weapons program.[65] Moreover, as Robert Einhorn finds, it is entirely the Indians who will decide which future reactors are to be designated as "civilian" and placed under safeguards.[66]

**Rebuttal: separation plan is credible**

Robert Joseph, Under Secretary of State for Arms Control and International Security, stated that this separation plan must be "credible and transparent, as well as defensible from a

[60] Uranium-233 has explosive properties similar to Plutonium-239. Although the plutonium created in this fuel cycle is more likely reactor-grade than weapons-grade, plutonium with less than 90% concentration of the Plutonium-239 isotope can still be made to explode. Graham T. Allison, et al, *Avoiding Nuclear Anarchy*, p. 217 (stating that plutonium of any isotopic content is usable in a weapon); and p. 223 n. 18 (noting that the contention that only plutonium enriched to more than 90 percent in the isotope Pu-239 can be used in a weapon has now been "decisively rebutted").

[61] S. Rpt. 109-288, p. 10 (referencing the National Strategy to Combat Weapons of Mass Destruction, Dec. 2002).

[62] Condoleezza Rice, Response to Question for the Record by the Secretary of State, reprinted in S. Rpt. 109-288, p. 178.

[63] Safeguards are designed to deter and detect diversion of civilian nuclear materials to an undeclared military program. In this regard, the safeguards regime in India is somewhat an anomaly because India has nuclear weapons. Thus, safeguards in this instance are designed to provide assurance and confidence that trade with India's civilian nuclear program does not assist its weapons program. S. Rpt. 109-288, p. 9.

[64] Separation Plan § 13, reprinted in S. Rpt. 109-288, pp. 67-68.

[65] S. Rpt. 109-288, pp. 8-9.

[66] Einhorn, Prepared Statement, Apr. 26, 2006.

nonproliferation standpoint."[67] Secretary Rice concluded that India's separation plan meets these criteria.[68] The Administration argues that India would place "more than just a token number of Indian nuclear facilities" under safeguards, because it captures 14 of its 22 reactors in operation or currently under construction. This is nearly two-thirds of India's current and planned thermal power reactors, as well as all future civil thermal and breeder reactors.[69] Moreover, the Administration argues that India has an incentive to declare facilities as civil and place them under safeguards because that is a precondition for international cooperation with that facility.[70]

## ***Critics: Reviewing Arguments in Favor in Light of Experience***

### **Critics: business gains are speculative**

Critics raise certain facts to rebut the Administration's claim that this agreement will create new American jobs. First, with respect to India's plan to increase its nuclear power use, India in the past had set a goal of 10,000 megawatts of nuclear generating capacity by 2000, but by 2005, it had only placed on-line 2,550 megawatts of capacity.[71] India's past shortfalls in meeting nuclear power targets may call into question its ability to meet plans it is currently making. Next, similar promises with respect to U.S. job creation were made when the United States-China nuclear cooperation agreement was implemented in 1997. To this date, China has bought exactly zero reactors from the United States.[72] Further, the U.S. comparative advantage in reactor technology is in light-water reactors operating on low-enriched uranium fuel, and not the fast breeder reactors that the Indian scientific community favors.[73]

### **Critics: India is less a pillar of nonproliferation than some have argued**

Critics seek to rebut the supporters' claims that India has a solid record on nonproliferation by noting that, since May 1998, the United States has imposed nonproliferation sanctions on a number of different Indian entities.[74] In fact, some of these entities were sanctioned for their activities involving Iran.[75] For example, the United States imposed sanctions on Dr. Y.S.R. Prasad, the former head of India's Nuclear Power Corporation, for his activities in Iran.[76] Moreover, India's reaction to U.S. sanctions on Indian companies may call into question the government's dedication to strengthened export controls, which is one of the commitments it made under the Joint Statement. For example, India continues to call for the sanctions against Dr. Prasad to be lifted.[77]

---

[67] Robert Joseph, Prepared Statement of the Under Secretary of State for Arms Control and International Security before the Senate Foreign Relations Committee hearing on the United States-Indian Nuclear Energy Cooperation, Nov. 2, 2005.
[68] Rice, Response to QFR, reprinted in S. Rpt. 109-288, p. 161.
[69] Rice, Response to QFR, reprinted in S. Rpt. 109-288, pp. 160-61.
[70] Joseph and Burns, Response to QFR Number 3, reprinted in S. Rpt. 109-288, pp. 73-74.
[71] Congressional Research Service Memorandum, reprinted in S. Rpt. 109-288, p. 218.
[72] Congressional Research Service Memorandum, reprinted in S. Rpt. 109-288, p. 220.
[73] Carter, Apr. 26, 2006.
[74] Rice, Response to QFR, reprinted in S. Rpt. 109-288, pp. 184-85.
[75] S. Rpt. 109-288, p. 20.
[76] Department of State Bureau of Nonproliferation, Imposition of Nonproliferation Measures Against Fourteen Foreign Entities, 69 Fed. Reg. 58,212 (Sept. 29, 2004).
[77] S. Rpt. 109-288, p. 20 (quoting a press release from the Indian embassy).

**Rebuttal: it is not a state policy of proliferation**

Supporters of the agreement do acknowledge that there are individual Indian companies that violate proliferation norms, but there is no state policy to proliferate (to Iran). Moreover, they would assert that "there have apparently been no Indian A.Q. Khans."[78]

## A Bill to Make the Necessary Changes in Law

Title I of S. 3709, the United States-India Peaceful Atomic Energy Cooperation Act, makes the changes necessary to the governing statutory regime to allow for peaceful nuclear cooperation with India. Title II of the bill is the United States Additional Protocol Implementation Act, which is the domestic legislation to bring the IAEA Additional Protocol into force domestically.[79] The Committee attached the implementing legislation for the Protocol to the India bill because India committed to signing and adhering to an Additional Protocol as part of the overall agreement, and thus it is in the interest of the United States to implement the Additional Protocol.[80]

Title II of S. 3709 (the Additional Protocol implementing legislation) is identical to S. 2489, which the committee reported to the Senate on April 3, 2006.[81] Since that time, the implementing legislation has been changed, in part, to codify how the United States would implement the Protocol. These changes will presumably be captured as part of a Managers' Amendment to the bill when it is brought to the floor for consideration. Of particular importance, these changes codify the policy to protect locations, activities, and information with direct national security significance from IAEA inspection or review. They also provide congressional notification and presidential determination requirements regarding any environmental sampling activity that may take place in the United States pursuant to the Additional Protocol, as environmental sampling in the United States raises particularly acute national security concerns. Another new codification provides that nationals from state sponsors of terrorism will not be permitted access to the United States for activity under the Additional Protocol. The Additional Protocol is specifically designed to detect undeclared nuclear activities. Many of the changes made in the implementing legislation are directed at merely codifying provisions the United States included its Additional Protocol to protect against revelation of sensitive information pertaining to its undeclared nuclear activities, which it is allowed to have as an acknowledged nuclear weapon state.

## Conclusion: The Proper Balance of Benefits and Concerns?

It will not be known for quite some time how this agreement will play out with respect to the main arguments in favor of and opposed to this agreement. It will certainly require vigilant and constant oversight in the years to come. The most important inquiry seems to be: will the benefit of a strengthened and deepened relationship with India come to pass, and will that benefit

[78] Carter, Apr. 26, 2006.
[79] A separate RPC Legislative Notice will discuss these pieces of legislation in detail.
[80] S. Rpt. 109-288, p. 15.
[81] S. Rpt. 109-288, p. 15.

outweigh some indeterminate cost to the nonproliferation regime? The Senate Foreign Relations Committee found this agreement to be "perhaps the most important strategic diplomatic initiative undertaken by this administration."[82] Moreover, the Committee was mindful of the nonproliferation implications of this agreement, and concluded that this agreement does not undercut U.S. compliance with its nonproliferation responsibilities, and that its bill to authorize the President to complete this agreement strikes the proper balance between competing concerns.[83]

[82] S. Rpt. 109-288, p. 2.
[83] S. Rpt. 109-288, pp. 2-3.